

S09 C44 - Computing related legislation

Section 09 - Legal moral ethical & cultural issues

Monday, October 2, 2023

Key terms

Data Protection Act 1998

- Controls the way data about living people is stored and processed

Computer Misuse Act 1990

- Makes it an offence to access or modify computer material without permission.

Copyright, Designs and Patents Act 1988

- Covers the copying or use of other peoples' work

Regulation of Investigatory Powers Act 2000

- Regulates surveillance and investigation, and covers the interception of communications

Objectives

- To be aware of computing related legislation, including:
 - The Data Protection Act 1998
 - The Computer Misuse Act 1990
 - The Copyright Design and Patents Act 1988
 - The Regulation of Investigatory Powers Act 2000
- To understand that developments in digital technologies have enabled massive transformations in the capacity of organisations to monitor behaviour, amass and analyse personal information

Connection: What is legislation?

- Legislation is the act or process of making or enacting laws.
- Laws can be national, and international
- Example: *The UK Data Protection Act 1988* is a national version of the *1995 European Union Data Protection Directive*. EU countries all have similar laws
- Laws can be criminal, or civil:
 - A civil case may end up with one side being awarded damages for loss
 - A criminal case may end up with a fine or a prison sentence for the guilty person

Computing related legislation
Unit 9 Legal, moral and cultural issues

Activation

Why are there laws about computing?

- You might expect unauthorised access to data, or 'hacking', to be a crime
- Task: What else would you expect to be made illegal?
 - Store or process personal data without keeping it secure, and other conditions
 - Make or trade in hacking tools – hardware or software
 - Make digital copies of other peoples' work without permission
 - Intercept messages such as phone calls or emails, without legal authority to do so



Computing related legislation
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Activation

The big four Acts

- The **Data Protection Act 1998**: controls the way data about living people is stored and processed
- The **Computer Misuse Act 1990** makes it an offence to access or modify computer material without permission.
- The **Copyright, Designs and Patents Act 1988** covers the copying or use of other peoples' work
- The **Regulation of Investigatory Powers Act 2000** regulates surveillance and investigation, and covers the interception of communications

Data Protection Act 1998

Storage and processing of personal details must

1. Be fair and lawful
2. Relevant and not excessive
3. Accurate and up to date
4. Only kept as long as needed
5. Only be used for the stated purpose
6. Be kept securely
7. Handled in line with peoples' rights
8. Not be transferred to countries without protection laws

Data Protection Act 1998

- "Personal details" refers to living, identifiable people
- The Act includes paper records as well as computerised ones
- Exceptions are:
 - National Security, e.g. data about suspected terrorists
 - Crime and Taxation, e.g. Police surveillance
 - Domestic purposes, e.g. an address book.

Task: Data breaches

- Do companies really allow personal details to be stolen?

Q1: How concerned are you about misuse of your personal data? Are you aware of how your social profile may be used by future employers?

Very
concerned

Computer Misuse Act 1990

- This makes 'hacking' a crime. It covers:
 - Unauthorised access to computer systems
 - Unauthorised access with intent to commit or facilitate a crime
 - Unauthorised modification of computer material
 - Making, supplying or obtaining anything that can be used in computer misuse offences



Computer Misuse Act 1990

- Examples of offences include
 - Spreading a virus
 - Attempting to log in without authorisation
 - Using someone else's login
 - Reading, changing or deleting data
 - Obtaining or creating a "packet sniffer"

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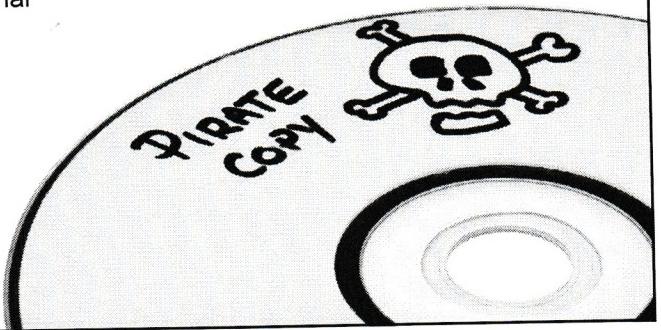
Q2: Describe some behaviours which would be illegal under this Act. Find some examples of the application of the Computer Misuse Act (e.g. www.computerevidence.co.uk/Cases/CMA.htm)

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Activation

Copyright, Designs and Patents Act 1988

- This protects creators of books, music, video and software from having their work illegally copied
- It applies to all forms of copying
 - What makes digital copying different is that each copy has the same quality as the original

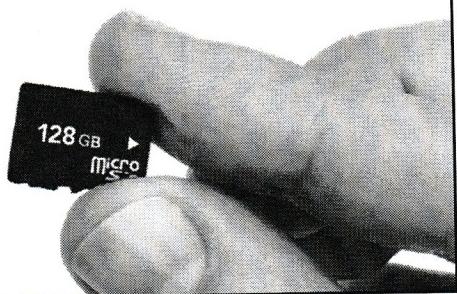


Teenager sentenced

- A 16-year-old from Plymouth admitted three offences relating to cyber attacks on SeaWorld in Florida and Devon and Cornwall Police.
- He said his dreams of joining the RAF were unlikely to happen now, but he hoped to study computer science
- SeaWorld estimated the attacks had cost them about £353,000 with an additional indirect cost of £99,000 for improving cyber security
 - The teenager was given a two-year rehabilitation order

Digital copies

- A card the size of a thumbnail can store several films, many music albums and a huge number of books
- Fast broadband means copies can be shared round the world, quickly



Task: Digital copies

- Is it legal to run a commercial software application on your laptop AND your desktop?

Defending copyright

The software industry can take some steps to prevent illegal copying of software

- The user must enter a unique key before the software is installed
- Some software will only run if the CD is present in the drive
- Some applications will only run if a special piece of hardware called a 'dongle' is plugged into a USB port on the computer

Software and copyright

- Tools used to create software may require fees if the software is then sold
- Applications, games, books, films and music are protected – but **algorithms** cannot be copyrighted

```
class Array
  def quick_sort
    return self if length <= 1
    pivot = self[0]
    less, greatereq = self[1..-1].partition { |x| x < pivot }
    less.quick_sort + [pivot] + greatereq.quick_sort
  end
end
```

Prosecuting the pirates

- In 2011 Anne Muir was convicted of distributing £54,000 worth of copyrighted music files by making them available to others via a peer-to-peer file sharing
- In 2012 two Leeds men were convicted of running film streaming websites
 - In 2016 the UK Government proposed to increase the maximum sentence for copyright piracy from two years in prison to **ten years**

Regulation of Investigatory Powers Act 2000

- Requires ISPs to assist in surveillance, secretly
- Enables mass surveillance of communications in transit and monitoring of Internet activities
- Enables certain public bodies to demand that someone hand over keys to protected information
- Prevents the existence of interception warrants and any data collected with them from being revealed in court

Q3: Why do some people object to this data being collected and stored? What are the arguments for and against organisations collecting such data?

It breaches the line of safety for security of information, some things should remain private and if stored can be looked at in wrong ways.

Task: Case Study: Edward Snowden

- Read the Edward Snowden case study on page 247. When reading, identify:
 - 3 essential points to consider, connect and remember
 - 2 vocabulary items to know, use and remember
 - 1 question you still have about the text



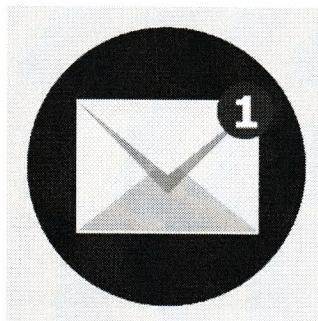
The Snowden files

- Edward Snowden provided an insight into how bulk data is collected and used by the US and other Governments
 - He leaked a large volume of classified material in 2013



PRISM: Mass surveillance

The documents leaked by Snowden revealed that the literal aim of the US Government was to collect, store, monitor and analyse metadata about all electronic communications by everybody in the world

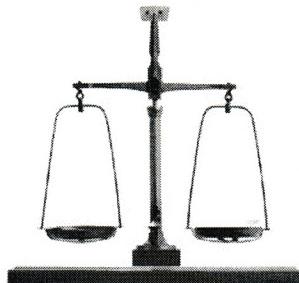


Keeping up to date

- As technology develops, laws may change
- The EU passed a new General Data Protection Regulation in May 2016
 - Member states have two years to pass it into national laws
- The UK Government has proposed an Investigatory Powers Bill to deal with interception of communication and acquiring bulk personal data
 - Critics call it a 'snooper's charter'

Balancing privacy and security

- On one hand, intercepting messages and analysing bulk data can help identify criminals and terrorists
- On the other, citizens value their privacy and may not trust their rulers



Activity

- Complete S09 C44 - Worksheet

Save as: S09 C44 Worksheet (your name)
Save in: Section 9

Consolidation: Using an example, describe each Act

Data Protection Act 1998

Computer Misuse Act 1990

Copyright, Designs and Patents Act 1988

Regulation of Investigatory Powers Act 2000

Homework

- Write notes on chapter 44
- Complete textbook exercises on chapter 44

